

**Pollution Report (POLREP) #125
TVA Kingston Fossil Fuel Plant Release Site Time-Critical Removal Action
Harriman, Roane County, Tennessee**



March 09 – 10, 2010

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**U. S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303-8960**

DATE: March 10, 2010

SUBJECT: Pollution Report (POLREP) #125
TVA Kingston Fossil Fuel Plant Release Site Time-Critical Removal Action
Harriman, Roane County, Tennessee

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REPORTING PERIOD: March 09 – 10, 2010

I. Background and Site Description

On Monday, December 22, 2008, a dike failure at the Tennessee Valley Authority (TVA) Kingston Fossil Fuel Plant caused the release of an estimated 5.4 million cubic yards of fly ash to the nearby Emory River. The overland impact was estimated at between 250-300 acres. EPA remobilized to the Site to begin work under the EPA/TVA Administrative Order on May 11, 2009. TVA's weekly report dated March 01 – 07 can be found at [www.epakingstontva.com/TVA Weekly Reports](http://www.epakingstontva.com/TVA%20Weekly%20Reports).

II. Site Status Highlights

A. Documents in Comment/Review:

- The Embayments and Dredge Cell EE/CA Report is available for public comment and can be viewed [here](#). The public comment period is 75 days beginning January 19th to April 5th.
- The [EE/CA Work Plan](#) public comment period ended December 20th.
- Responsiveness Summary for comments received during the public comment period on the EE/CA Work Plan have been posted [here](#).
- The [Community Involvement Plan](#) public comment period ended December 20th.
- TDH draft [Public Health Assessment](#) public comment period ended Tuesday March 9th.

B. Significant Operational Activities:

- EPA and TVA in coordination with Coast Guard and other appropriate agencies have extended the Emory River closure to May 15th for mile marker 0 to 6. River closure will be established to the furthest dredging extent and adjusted as dredging progresses. Watch for additional dredge and closure updates at www.epakingstontva.com.

- Ash disposal transport to Perry County, AL: 1 train transported ash during this reporting period (174 trains have left the site as of Wednesday). No train transported on Wednesday due to heavy rain fall in Perry County.
- Two 16 inch dredges and two 14 inch dredges operated during this reporting period. Dredge #5 (14 inch) parts being assembled at south boat ramp. Daily work day removal average east of Dike 2 from February 1st to present (including excavation) is approximately 7,001 cys.
- OSC released the [Dredging Determination Memo](#) on Tuesday March 9th.

C. Meteorological Conditions

- Water elevation 735.93 ft; river water flow 542 ([Oakdale](#) is used for early indication for river flow surge).
- Rainfall during this reporting period: 0.00 inches.
- Cumulative rainfall for this week: 0.00 inches.

III. Superfund Division Operations, Coordination, and Oversight Activities

A. Current EPA Incident Management Staffing

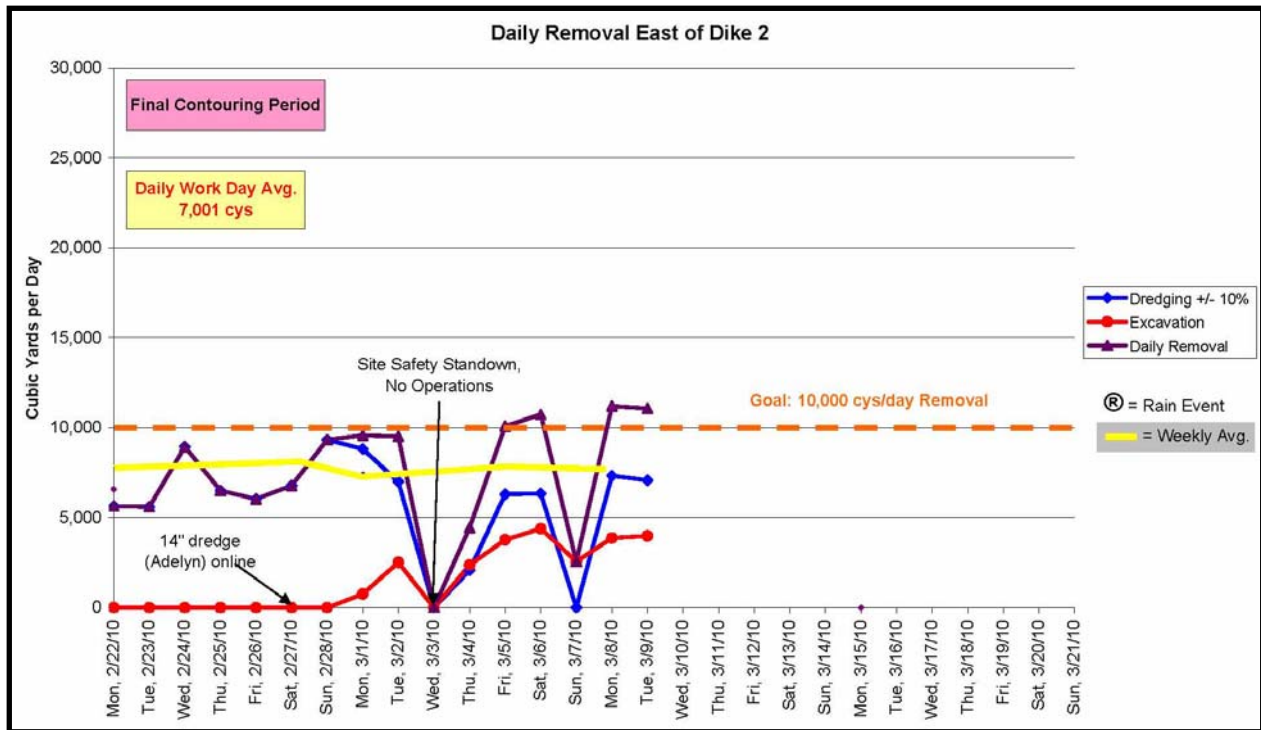
- 1 EPA On-Scene Coordinator (OSC)
- 1 EPA Remedial Project Manager (RPM, offsite)
- 1 EPA Community Involvement Coordinator (CIC)
- 5 Superfund Technical Assessment and Response Team (START) Contractors
- 2 US Coast Guard (Gulf Strike Team)
- 1 US Army Corps of Engineers (USACE, offsite in consult)
- 4 Bureau of Reclamation (BOR, 2 onsite)
- 2 EPA Emergency Response Team (ERT) National Health and Safety (offsite) and QAPP reviewer (offsite)

B. Time Critical (East of Dike 2) Fly Ash Excavation, Dredging, and Disposal Operations

<i>Estimated Amounts</i>	Cumulative	During This Period	Dates of this Period
Dredging	2,150,144 cys*	14,419 cys*	Mar. 08 – 09
Excavation	604,307 cys	7,861 cys	Mar. 08 – 09
Total (dredging + excavation)	2,754,450 cys	22,280 cys	Mar. 08 – 09
Disposal	1,608,077 tons	10,300 tons	Mar. 09 – 10

*Dredge values are estimated due to position of dredges making areas not able to be surveyed. Validated numbers require 3 to 5 working days to be updated.

Note: All graphs and cumulative amounts have been updated with latest validated dredge values. Graph of previous production periods available [here](#) for viewing.



1. TVA Dredging ([dredging work plans link](#))

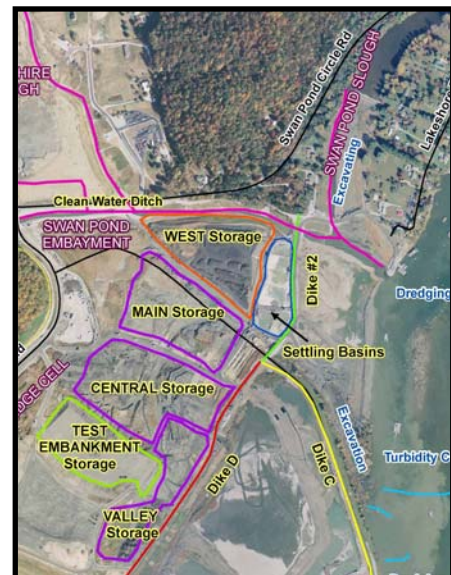
- TVA 14 inch, 12 inch, and 10 inch dredges being used to maintain settling capacity in ash settling pond.
- 4 dredges were in operation Monday and Tuesday March 8th and 9th. Dredge #5 (14 inch) parts being assembled at south boat ramp.
 - 16 inch dredge (Kylee): 43.0 hours
 - 16 inch dredge (Shirley): 45.3 hours
 - 14 inch dredge (McKenzie): 48.0 hours
 - 14 inch dredge (Adelyn): 23.3 hours

2. TVA Excavation ([excavation work plans link](#))

- Excavation continued on Monday and Tuesday March 8th and 9th for area east of Dike 2 and Swan Pond Slough.
- Ash being hauled to WEST storage west of Dike 2.
 - Volume stored in west ash area: 175,274 cys.
- Ash being hauled to MAIN storage west of Dike 2.
 - Volume stored in main ash area: 1,129 cys.
- Ash being hauled to VALLEY storage west of Dike 2.
 - Volume stored in valley ash area: 178,920 cys.
- Ash being hauled to CENTRAL storage area.
 - Volume stored in central storage area: 114,589 cys.
- Ash being hauled to TEST EMBANKMENT storage area.
 - Volume stored in test embankment area: 357,720 cys.

3. TVA Fly Ash Loading and Disposal ([disposal work plans link](#))

- Drying agents continue to be added to railcars.



- 108 railcar train transported on Tuesday March 9th. No train transported on Wednesday March 10th due to heavy rain in Perry County, AL.
4. Ash Recovery System Improvements
 - Dredging to Lateral Expansion has stopped until additional capacity is created. Daily average: 1,781 cys.
 - Mechanical Filter Presses not operating due to no dredge slurry from ash pond dredges feeding presses. Design production for 24-hour work day is 4,600 cys. Daily average since January 11th: 743 cys. For the week of March 1st through 6th: 645 cys.
 - Lime drying/stabilization has been added as an operational improvement with an intent to reduce moisture content in ash to be handled.
 5. Other Site Operations ([time critical work plans link](#))
 - OSC released the Dredging Determination Memo on Tuesday March 9th.
 - TVA Phase 2 bathymetry was completed week of January 4th. Data and maps are pending. Phase 1 maps available at www.epakingstontva.com/Nature and Extent. Work plan available at www.epakingstontva.com/Nature and Extent/Sub-bottom Profiling Workplan Final.

C. Time Critical Support Activities

1. **BOR** on-site consulting OSC as per Interagency Agreement (IAG) on construction and engineering assessments of:
 - stability of dikes
 - ash stacking height in ash processing areas
 - rim ditch stability
 - additional wet ash processing areas
 - additional onsite construction management support is scheduled by March 1, 2010
2. **US Coast Guard (Gulf Strike Team)** on-site as per IAG to provide health and safety oversight, decontamination oversight and river closure management.
 - As part of health and safety oversight, providing perimeter monitoring of truck movement, vehicle/equipment decontamination as well as enforcement of on-site exclusion zones including Emory River closure area.
 - EPA and TVA in coordination with Coast Guard and other appropriate agencies have extended the Emory River closure to May 15th for mile marker 0 to 6. River closure will be established to the furthest dredging extent and adjusted as dredging progresses. Watch for additional dredge and closure updates at www.epakingstontva.com.
3. **EPA Data Team** offsite providing oversight to SCRIBE database activities.
 - TDEC continues to compile SCRIBE database and publishing analytical data.
 - START has published EPA and TVA analytical data to SCRIBE database.
4. **START** on-site conducting cenosphere recon and independent field sampling activities.
 - Conducting cenosphere and debris location reconnaissance focusing on historically known collection areas on the Emory, Clinch, and Tennessee Rivers. Reports are coordinated with TVA for response actions.
 - Storm event split sampling occurred Monday February 22nd. Results are pending.
 - Began conducting bi-monthly water quality routine split sampling February 2010.

5. **ERT** offsite providing technical assistance.
 - Assists OSC in reviewing QAPP's from non-governmental organizations.
 - Assists OSC in Health and Safety audits and plan reviews.
6. **USACE** offsite providing support to OSC.
 - Reviewing productivity and practicality of draft dredge addendum.
 - Providing expertise for Weir 1 decision making.
 - Providing storm event sediment migration modeling.

D. Public Information and Community Involvement Activities

1. **Community Involvement Coordinator Activities**
 - CIC attended availability Session on Tuesday March 9th.
 - RPM scheduled to present at TVA Environmental Symposium at Roane State Community College on Thursday and Friday March 11th and 12th.
 - CAG holding public meeting for EE/CA alternatives on Monday March 15th at the Roane County Courthouse from 6:30 – 8:30 pm.
 - The Embayments and Dredge Cell EE/CA Report is available for public comment and can be viewed [here](#). The public comment period is 75 days beginning January 19th to April 5th.
 - CIP and EE/CA Work Plan public comment period ended December 20th. CIP is available [here](#).
 - START contractor providing technical support to EPA OSC and CIC for public information.
2. **Public Information**
 - Press release for the Emory River closure can be found [here](#).
 - Press release for the Embayments and Dredge Cell EE/CA Report can be found [here](#).

E. State Coordination

- TDH draft [Public Health Assessment](#) public comment period ended Tuesday March 9th.
- TDEC released "[Lessons Learned from the TVA Kingston Dredge Cell Containment Facility Failure: TDEC Advisory Board Recommendations for Safe Performance](#)" on Monday November 30th.
- Tennessee Department of Environment and Conservation (TDEC) coordinating with USACE/ERDC on "Evaluation of Metals Release from Oxidation of Fly Ash during Dredging of the Emory River, TN". Report was released Tuesday October 20th and can be viewed [here](#).
- TDEC is addressing fugitive dust issues outside of houses.
- TDEC forwarding community concerns to START in response to cenosphere reports.
- TDEC and Tennessee Department of Health (TDH) in coordination with OSC continue to address concerns related to lower Emory River advisory. Contact TDH or TDEC's Barbara Scott (865-696-9614) for concerns.
- Full TDEC report regarding the September 18th stack emissions event can be found [here](#).

IV. Water Protection Division Activities

- No report during this reporting period.

V. Resource Conservation and Recovery Act (RCRA) Division Activities

- No report during this reporting period.

VI. Air, Pesticides and Toxics Management Division (APTMD) Activities

- Air monitoring network operated by TVA and TDEC continues collecting PM data that is in compliance with the National Ambient Air Quality Standards.
- *EPA continues reviewing the air quality monitoring conducted by TDEC and TVA and confirms TDEC's belief that there is no known threat to public health from an air pollution exposure associated with the clean-up of the ash spill at the TVA Kingston Steam Plant. National ambient air quality standards for inhalable particulate (PM10) and respirable particulate (PM2.5) are being met. Air sampling continues to show no metal concentrations of concern. Persons wishing to view the monitoring data can see it at the following web address: <http://www.state.tn.us/environment/kingston/air/>.*

VII. Science and Ecosystem Support Division (SESD) Activities

- SESD's EPA Performance Audits and Network Assessment of the Ambient Air Monitoring Network has been posted [here](#).
- SESD's EPA Performance Audits for field sampling and QAPP audit conducted Monday through Thursday January 11th – 14th. Audit report can be found [here](#). SESD continues to provide audit follow-up activities to OSC including participating in data management quality assurance weekly calls and scheduling for lab audits.

VIII. EPA Federal Facilities Division Activities

- Reviewing Emory River mile marker 0 to 1 and Clinch River legacy sediment issues as part of the DOE interagency workgroup.

IX. Non-Time Critical Removal Action Activities

- Embayments and Dredge Cell EE/CA Report is available for public comment and can be viewed [here](#). The public comment period is 75 days beginning January 19th to April 5th.
- River sampling work plan based on Wednesday October 7th meeting for ecological risk sampling on Emory, Clinch, and Tennessee Rivers is expected for release early March. Additional sampling based on this work plan is expected in spring 2010.
- Responsiveness Summary for comments received during the public comment period on the EE/CA Work Plan have been posted [here](#).

X. Recommended Sources for Additional Information

- TVA's weekly report dated March 01 – 07.